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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,572	07/25/2003	Mohammed N. Islam	069204.0234	5239
5073	7590	08/12/2004	EXAMINER	
BAKER BOTTS L.L.P. 2001 ROSS AVENUE SUITE 600 DALLAS, TX 75201-2980			HUGHES, DEANDRA M	
			ART UNIT	PAPER NUMBER
			3663	
DATE MAILED: 08/12/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/627,572

Applicant(s)

ISLAM, MOHAMMED N.

Examiner

Deandra M Hughes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/25/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7, 9, 11-16, 18, 20-22, 24-27, and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergano (Wavelength Division Multiplexing in Long-Haul Transmission Systems, Journal of Lightwave Technology, Vol. 14, No. 6, June 1996) in view of Judy (US 5,905,838 filed Feb. 18, 1998).

With regard to claims 1-2, 4, 7, 11-12, 15, 20-21, and 26 Judy discloses dispersion managed Raman amplified stages ($R_1 - R_5$). These stages are pumped by sources that are separated by the signal (1310nm/1550nm) by the Stokes Shift. Further, it is well known in the art that the transmission line itself is the Raman gain medium. Judy does not specifically teach that the zero-dispersion wavelengths of the segments comprising the transmission line are separated by more than 50 nm. However, Bergano teaches a dispersion-managed long-haul transmission line wherein the zero-dispersion wavelength of the segments is separated by more than 275 nm (pg. 1299, last 3 lines; fig. 1). It would have been obvious to one of ordinary skill in the art (e.g., an optical engineer) to use the dispersion-managed line of Bergano for the advantage of minimizing the deleterious effect of dispersion on the transmission signal.

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With regard to claims 3, 13, 25, and 29, one optical signal is in the range of 1430 nm to 1630 nm (1550nm).

With regard to claims 5 and 16, Judy discloses that the segments have opposite signs of dispersion (fig. 3 and 5B).

With regard to claims 6, 14, and 22, Raman amplification in long-haul transmission lines is distributed amplification.

With regard to claims 9, 18, 24, and 30, 1310 nm and 1550 nm constitute a plurality of signals.

3. Claims 8, 10, 17, 19, 23, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergano (Wavelength Division Multiplexing in Long-Haul Transmission Systems, Journal of Lightwave Technology, Vol. 14, No. 6, June 1996) in view of Judy (US 5,905,838 filed Feb. 18, 1998) and further in view of Chraplyvy (US 6,191,877 filed Jul. 15, 1996). Bergano in view of Judy does not specifically disclose counter-pumping of Raman amplifiers with semiconductor lasers. However, this concept is well known in the art. Further, it is taught by Chraplyvy (e.g. PUMP 13 or 16). It would have been obvious to one of ordinary skill in the art (e.g., an optical engineer) to counter-pump the Raman amplifier with semiconductor lasers for the advantage of reducing the detrimental effect of crosstalk between channels.

Information Disclosure Statement

4. Items AC and AD on page 8 of the information disclosure statement filed 7/25/2003 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the Examiner is unable to determine which PCT International Search Reports

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are being reference. The application numbers are not provided. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609

¶ C(1).

5. The MPEP states the following with respect to large information disclosure statements:

*Although a concise explanation of the relevance of information is not required for English language information, applicants are encouraged to provide a concise explanation of why the English-language information is being submitted. Concise explanations (especially those that point out the relevant pages and lines) are helpful to the Office, particularly where documents are lengthy and complex and applicant is aware of a **section that is highly relevant to patentability** or where a large number of documents are submitted and **applicant is aware that one or more is highly relevant to patentability**. -- M.P.E.P. § 609 (emphasis added).*

“Aids to Compliance With Duty of Disclosure,” item 13:

*It is desirable to avoid the submission of long lists of documents if it can be avoided. Eliminate clearly irrelevant information and marginally pertinent cumulative information. If a long list is submitted, **highlight those documents which have been specifically brought to Applicant’s attention and/or are known to be of the most significance**. -- M.P.E.P. § 2004 (emphasis added).*

Therefore, it is recommended that if any information that has been cited by Applicant in the Information Disclosure Statement(s) is known to be material to patentability as

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defined by 37 C.F.R. § 1.56, Applicant should present a concise statement as to the relevance of that/those particular documents.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deandra M Hughes whose telephone number is 703-306-4175. The examiner can normally be reached on M-F, 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H Tarcza can be reached on 703-306-4171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DMH

MARK HELLNER
PRIMARY EXAMINER
Mark Hellner